

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-534

Relating to Exemptions under
Section 27156 of the Vehicle Code

Liberty Motor Company, Inc.
Replacement Fuel Tank Systems

Pursuant to the authority vested in the Air Resources Board (ARB) by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That installation of replacement fuel tank systems, manufactured by Liberty Motor Company, Inc. of 2390 S. Service Road W., Oakville, Ontario, Canada L6L 5M9, has been found not to reduce the effectiveness of the applicable vehicle pollution control system, and therefore, the replacement fuel tank systems are exempt from the prohibitions of Section 27156 of the Vehicle Code for installation on 1996 through 2000 model-year Ford Motor Company 3.0 and 3.8 liter gasoline Windstar minivans, originally equipped with a 20- or a 26-gallon plastic fuel tank.

This exemption is based on the 2-day diurnal evaporative emission test and On-Board Diagnostic II (OBD II) system test conducted by Technessen Ltd. (formerly Liberty's parent company). The test data showed that evaporative emissions of a 1998 Windstar modified with the fuel tank system were below the applicable standard. Technessen also showed that the fuel tank system did not affect the operation of the vehicle's OBD II leak detection system. The same evaporative emission and OBD II system impact is expected when the fuel tank systems are used on any of the vehicles included in the exemption.

Exemption of the replacement fuel tank systems shall not be construed as an exemption to sell, offer for sale, or advertise any component of the replacement fuel tank systems as individual devices.

This Executive Order shall not apply to any device advertised, offered for sale, sold with, or installed on a motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order is valid provided that installation instructions for the replacement fuel tank systems do not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

Changes made to the design or operating conditions of the replacement fuel tank systems, as exempt by the ARB, which adversely affect the performance of the vehicle's pollution control system shall invalidate this Executive Order.

Marketing of the replacement fuel tank systems using an identification other than that shown in this Executive Order or for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the ARB.

In addition to the foregoing, the ARB reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222 et seq.

This Executive Order does not constitute any opinion as to the effect the use of the replacement fuel tank systems may have on any warranty either expressed or implied by the vehicle manufacturer.

No claim of any kind, such as "Approved by the Air Resources Board," may be made with respect to the action taken herein in any advertising or other oral or written communication.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF LIBERTY MOTOR COMPANY, INC.'S REPLACEMENT FUEL TANK SYSTEMS.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order. The Executive Order may be revoked only after a ten-day written notice of intention to revoke the Executive Order, in which period the holder of the Executive Order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request, and the Executive Order may not be revoked until a determination is made after a hearing that grounds for revocation exist.

Executed at El Monte, California, this 5TH day of March 2002.


Allen Lyons, Chief
New Vehicle/Engine Programs Branch

EVALUATION SUMMARY

Manufacturer Name: Liberty Motor Company, Inc.

Name of Device: Replacement Fuel Tank Systems

Background:

Liberty Motor Company, Inc. (Liberty) of 2390 S. Service Road W., Oakville, Ontario, Canada L6L 5M9 has applied for transfer of Vehicle Code 27156 exemption Executive Orders D-491 and D-491-1. The exemptions were issued to Technessen Ltd. for its replacement fuel tank systems used on 1995-2000 model-year Ford Motor Company gasoline Windstar minivans. Since the issuance of these exemptions, Technessen has ceased operation, and Liberty, which had been operating under Technessen, is now operating as an independent entity and is the authorized marketer of the replacement fuel tank systems. As a result, Liberty has requested transfer of the existing exemptions to Liberty. In addition, Liberty has requested a change to the fuel tank system design.

Recommendation:

Grant exemption to Liberty as requested and issue Executive Order D-534.

Device Description:

Liberty's replacement fuel tank systems allow lowering of the van floor for wheel chair access. The lowered floor extends approximately 90 inches forward from the rear bumper. This modification requires replacement and re-location of the stock fuel tank from the original mid-ship location to just in front of the lowered floor. In the modification, the stock high-density polyethylene (HDPE) plastic fuel tank is replaced with Liberty's 20-gallon 16-gauge stainless steel fuel tank. The stock emission canister(s) is retained but moved forward, adjacent to the fuel tank. The fuel system includes extension fuel and vapor lines (high pressure/low permeation SAE 30R9 lines and SAE 30R7 lines). The rollover and emission control valves are replaced with Ford parts. The stock fuel pump/sending unit, filler tube, and gas cap are retained and/or replaced with Ford parts.

D-534 covers the following systems and vehicles:

- (1) 1999-2000 Ford Windstars, originally equipped with a 26-gallon HDPE fuel tank. This is a transfer of D-491-1. Liberty replaces the stock tank with its 20-gallon steel tank. The stock fuel pump/sending unit is retained in the installation.
- (2) 1996-1998 Ford Windstars that meet California's emission standards and On-Board Diagnostic II (OBD II) system requirements, including federal and Canadian Windstars. This is essentially a transfer of D-491 with one change. D-491 exempted a system that re-uses the stock 20-gallon HDPE tank. Liberty no longer offers this system. Instead, Liberty will be replacing the stock tank with its steel tank. The change covered under D-534 is the replacement of the stock tank with Liberty's 20-gallon 16-gauge stainless steel tank. This is the same system used in Liberty's 1999-2000 system. To allow correct mounting and fitting, the stock fuel pump/sending units on the 1996-1998 Windstars are replaced with Ford's 1999-2000 fuel pump/sending unit.

Liberty's fuel tanks are fabricated by Sidhu Metals and Robica Manufacturing Ltd. of Ontario, Canada. The van conversions are performed by Liberty, Creative Carriage Ltd., and Advance Star of Ontario, Canada.

Discussion/Basis for the Recommendation:

Exemption under Executive Order D-491 was based on the 2-day diurnal evaporative emission test and OBD II system test results submitted by Technessen. Testing showed that a 1998 model-year 3.8 liter Windstar modified with Technessen's fuel tank system (system re-used the stock tank) did not exceed the applicable 2-day diurnal emission standard. It also showed that the fuel system did not have any adverse impact on the vehicle's OBD II system (0.040-inch diameter leak). Based on engineering evaluation of the design changes (replacement of the stock tank with steel tank) and carry-over of Technessen's 1998 test data, Executive Order D-491-1 was issued, exempting the system for use on 1999-2000 Windstars. Liberty will essentially be marketing the same systems exempted under D-491 and D-491-1. Therefore, the exemptions are transferred and extended to Liberty as requested.